

**Amendments to the Claims:****Listing of Claims:**

Claim 1 (currently amended): A metal layer structure comprising:

- a substrate;
- 5 a first dielectric layer on a surface of the substrate;
- at least one metal structure disposed in the first dielectric layer;
- a second dielectric layer disposed on the first dielectric layer and the metal structure;
- at least one first conductor on the first dielectric layer;
- 10 at least one second conductor on the first dielectric layer, the second conductor having at least one thin portion, wherein the thickness of the thin portion is less than the thickness of the first conductor; and
- at least one conductive plug disposed in the second dielectric layer for connecting the first conductor, the second conductor and the metal structure.

15

Claim 2 (original): The metal layer structure of claim 1 wherein the second conductor has at least one thick portion.

20

Claim 3 (original): The metal layer structure of claim 2 wherein a thickness of the first conductor is equal to a thickness of the thick portion.

Claim 4 (original): The metal layer structure of claim 2 wherein a ratio of a thickness of the thick portion to a thickness of the thin portion is approximately 1 to 8.

25

Claim 5 (original): The metal layer structure of claim 2 wherein a thickness of the thick portion is approximately 0.8 to 1.6 $\mu$ m, and a thickness of the thin portion is smaller than 0.8 $\mu$ m.

30

Claim 6 (previously presented): The metal layer structure of claim 1 further comprising:

- a first opening exposing the first conductor;
- a second opening exposing the thin portion; and

a third dielectric layer on the first dielectric layer that covers the first conductor and the second conductor.

5 Claim 7 (previously presented): The metal layer structure of claim 6 wherein the third dielectric layer is a PE-oxide layer.

Claim 8 (canceled)

10 Claim 9 (previously presented): The metal layer structure of claim 1 wherein the metal structure is copper (Cu).

Claim 10 (previously presented): The metal layer structure of claim 1 wherein the first dielectric layer is a low-k dielectric layer.

15 Claim 11 (previously presented): The metal layer structure of claim 1 wherein the metal structure is copper, and the first dielectric layer is a low-k dielectric layer.

20 Claim 12 (original): The metal layer structure of claim 11 wherein a dielectric constant of the low-k dielectric layer is approximately 2.0 to 3.5.

Claim 13 (original): The metal layer structure of claim 11 wherein the low-k dielectric layer comprises a carbon-contained oxide layer or an inorganic dielectric material layer.

25 Claim 14 (currently amended): A metal layer structure comprising:  
a substrate;  
a first dielectric layer on a surface of the substrate;  
at least one metal structure disposed in the first dielectric layer;  
a second dielectric layer disposed on the first dielectric layer and the metal  
30 structure;  
at least one first conductor on the first dielectric layer;  
at least one second conductor on the first dielectric layer; and

at least one conductive plug disposed in the second dielectric layer for connecting the first conductor, the second conductor and the metal structure;

wherein the first conductor comprises a first thickness and the second conductor comprises a second thickness and a third thickness ~~have a first thickness and a second thickness, respectively, and wherein~~ the first thickness, ~~and~~ the second thickness, and the third thickness impart different functions to the first conductor and second conductor, respectively.

Claim 15 (original): The metal layer structure of claim 14 wherein a ratio of the first thickness to the second thickness

Claim 16 (original): The metal layer structure of claim 14 wherein the first thickness is approximately 0.8 to 1.6 $\mu$ m, and the second thickness is smaller than 0.8 $\mu$ m.

Claim 17 (previously presented): The metal layer structure of claim 14 further comprising:

a first opening exposing the first conductor;  
a second opening exposing the second conductor; and  
a third dielectric layer on the first dielectric layer that covers the first conductor and the second conductor.

Claim 18 (previously presented): The metal layer structure of claim 17 wherein the third dielectric layer is a PE-oxide layer.

Claim 19 (canceled)

Claim 20 (previously presented): The metal layer structure of claim 14 wherein the metal structure is copper (Cu).

Claim 21 (previously presented): The metal layer structure of claim 14 wherein the first dielectric layer is a low-k dielectric layer.

Claim 22 (previously presented): The metal layer structure of claim 14 wherein the metal structure is copper, and the first dielectric layer is a low-k dielectric layer.

5 Claim 23 (original): The metal layer structure of claim 22 wherein a dielectric constant of the low-k dielectric layer is approximately 2.0 to 3.5.

Claim 24 (original): The metal layer structure of claim 22 wherein the low-k dielectric layer comprises a carbon-contained oxide layer or an inorganic dielectric material layer.

10

Claim 25 (previously presented): A fuse structure comprising:

a substrate, a bonding pad area and a fuse area being included on a surface of the substrate;

15 a first dielectric layer on the surface of the substrate;

at least one metal structure disposed in the first dielectric layer;

a second dielectric layer disposed on the first dielectric layer and the metal structure;

20 at least one first conductor on the first dielectric layer in the bonding pad area;

at least one second conductor on the first dielectric layer in the fuse area; and

at least one conductive plug disposed in the second dielectric layer for connecting the first conductor, the second conductor and the metal structure;

wherein the first conductor having a first thickness is used as a bonding pad, and the second conductor having a second thickness smaller than the first thickness is used as a fuse.

25

Claim 26 (original): The fuse structure of claim 25 wherein a ratio of the first thickness to the second thickness is approximately 1 to 8.

30 Claim 27 (original): The fuse structure of claim 25 wherein the first thickness is approximately 0.8 to 1.6 $\mu$ m, and the second thickness is smaller than 0.8 $\mu$ m.

Claim 28 (previously presented): The fuse structure of claim 25 further comprising:

a first opening exposing the first conductor;  
a second opening exposing the second conductor; and  
a third dielectric layer on the first dielectric layer that covers the first conductor  
and the second conductor.

5

Claim 29 (previously presented): The fuse structure of claim 28 wherein the third  
dielectric layer is a PE-oxide layer.

Claim 30 (canceled)

10

Claim 31 (previously presented): The fuse structure of claim 25 wherein the metal  
structure is copper (Cu).

Claim 32 (previously presented): The fuse structure of claim 25 wherein the first  
15 dielectric layer is a low-k dielectric layer.

Claim 33 (previously presented): The fuse structure of claim 25 wherein the metal  
structure is copper, and the first dielectric layer is a low-k dielectric layer.

20 Claim 34 (original): The fuse structure of claim 33 wherein a dielectric constant of the  
low-k dielectric layer is approximately 2.0 to 3.5.

Claim 35 (original): The fuse structure of claim 33 wherein the low-k dielectric layer  
comprises a carbon-contained oxide layer or an inorganic dielectric material layer.

25

Claim 36 (previously presented): A fuse structure comprising:

a substrate, a fuse area being included on a surface of the substrate;  
a first dielectric layer on the surface of the substrate;  
at least one metal structure disposed in the first dielectric layer;  
30 a second dielectric layer disposed on the first dielectric layer and the metal  
structure;  
at least one fuse on the second dielectric layer in the fuse area, the fuse having a

thin portion and a thick portion;

at least one conductive plug disposed in the second dielectric layer for connecting the fuse and the metal structure;

a third dielectric layer on the second dielectric layer that covers the thick portion;

5 and

a first opening in the third dielectric layer exposing the thin portion.

Claim 37 (original): The fuse structure of claim 36 wherein a ratio of a thickness of the thick portion to a thickness of the thin portion is approximately 1 to 8.

10

Claim 38 (original): The fuse structure of claim 36 wherein a thickness of the thick portion is approximately 0.8 to 1.6 $\mu$ m, and a thickness of the thin portion is smaller than 0.8 $\mu$ m.

15 Claim 39 (previously presented): The fuse structure of claim 36 further comprising:  
at least one bonding pad on the second dielectric layer in a bonding pad area;  
a second opening in the third dielectric layer exposing the bonding pad; and  
a fourth dielectric layer on the third dielectric layer that covers the thin portion.

20 Claim 40 (previously presented): The fuse structure of claim 39 wherein the fourth dielectric layer is a PE-oxide layer.

Claim 41 (canceled)

25 Claim 42 (previously presented): The fuse structure of claim 36 wherein the metal structure is copper (Cu).

Claim 43 (previously presented): The fuse structure of claim 36 wherein the first dielectric layer is a low-k dielectric layer.

30

Claim 44 (previously presented): The fuse structure of claim 36 wherein the metal structure is copper, and the first dielectric layer is a low-k dielectric layer.

Claim 45 (original): The fuse structure of claim 44 wherein a dielectric constant of the low-k dielectric layer is approximately 2.0 to 3.5.

- 5 Claim 46 (original): The fuse structure of claim 44 wherein the low-k dielectric layer comprises a carbon-contained oxide layer or an inorganic dielectric material layer.

Claim 47 (previously presented): A metal layer structure comprising:

- a substrate;
- 10 a first dielectric layer on a surface of the substrate;
- at least one metal structure disposed in the first dielectric layer;
- a second dielectric layer disposed on the first dielectric layer and the metal structure;
- at least one first conductor on the first dielectric layer;
- 15 at least one second conductor on the first dielectric layer; and
- at least one conductive plug disposed in the second dielectric layer for connecting the first conductor, the second conductor and the metal structure;
- wherein the first conductor having a first thickness is a first material, and the second conductor having a second thickness different from the first thickness is a
- 20 second material.

Claim 48 (original): The metal layer structure of claim 47 wherein a ratio of the first thickness to the second thickness is approximately 1 to 8.

- 25 Claim 49 (original): The metal layer structure of claim 47 wherein the first thickness is approximately 0.8 to 1.6 $\mu$ m, and the second thickness is smaller than 0.8 $\mu$ m.

Claim 50 (previously presented): The metal layer structure of claim 47 further comprising:

- 30 a first opening exposing the first conductor;
- a second opening exposing the second conductor; and
- a third dielectric layer on the first dielectric layer that covers the first conductor

and the second conductor.

Claim 51 (previously presented): The metal layer structure of claim 50 wherein the third dielectric layer is a PE-oxide layer.

5

Claim 52 (canceled)

Claim 53 (previously presented): The metal layer structure of claim 47 wherein the metal structure is copper (Cu).

10

Claim 54 (previously presented): The metal layer structure of claim 47 wherein the first dielectric layer is a low-k dielectric layer.

Claim 55 (previously presented): The metal layer structure of claim 47 wherein the metal structure is copper, and the first dielectric layer is a low-k dielectric layer.

15

Claim 56 (original): The metal layer structure of claim 55 wherein a dielectric constant of the low-k dielectric layer is approximately 2.0 to 3.5.

20 Claim 57 (original): The metal layer structure of claim 55 wherein the low-k dielectric layer comprises a carbon-contained oxide layer or an inorganic dielectric material layer.

25 Claim 58 (previously presented): The metal layer structure of claim 2 wherein the thick portion and the thin portion of the second conductor comprise same material.

Claim 59 (previously presented): The metal layer structure of claim 14 wherein the first conductor having the first thickness and the second conductor having the second thickness comprise same material.

30

Claim 60 (previously presented): The fuse structure of claim 25 wherein the first conductor having the first thickness and the second conductor having the second



thickness comprise same material.

Claim 61 (previously presented): The fuse structure of claim 36 wherein the thick portion and the thin portion of the fuse comprise same material.

5

Claim 62 (previously presented): The metal layer structure of claim 47 wherein the first conductor having the first thickness and the second conductor having the second thickness comprise same material.

10